

Title (en)  
Cooling water circuit system

Title (de)  
Kühlungssystem mit Wasserkreislauf

Title (fr)  
Système de refroidissement à circuit de l'eau

Publication  
**EP 1522689 A1 20050413 (EN)**

Application  
**EP 04023692 A 20041005**

Priority  
JP 2003348679 A 20031007

Abstract (en)  
A cooling water circuit system for an engine includes a radiator bypass passage (30, 40) through which cooling water of the engine bypasses a radiator (21), a heat exchanger (110) disposed in the radiator bypass circuit to perform heat exchange between the cooling water and lubricant oil of an automatic transmission, and a radiator downstream passage (22) through which the cooling water from the radiator flows into the heat exchanger. Further, a flow adjusting unit (120, 121) is disposed at a join portion where the radiator bypass passage and the radiator downstream passage are joined, to adjust a flow ratio between the cooling water flowing from the radiator downstream passage to the heat exchanger and the cooling water flowing from the radiator bypass passage to the heat exchanger. The flow adjusting unit is controlled by a control unit (140) in accordance with the temperature detected by the temperature detection unit. <IMAGE>

IPC 1-7  
**F01P 7/16**

IPC 8 full level  
**F01P 7/16** (2006.01); **F01M 5/00** (2006.01); **F01P 7/14** (2006.01)

CPC (source: EP US)  
**F01P 7/165** (2013.01 - EP US); **F01M 5/007** (2013.01 - EP US); **F01P 2007/146** (2013.01 - EP US); **F01P 2025/40** (2013.01 - EP US); **F01P 2037/02** (2013.01 - EP US); **F01P 2060/045** (2013.01 - EP US); **F01P 2060/08** (2013.01 - EP US)

Citation (applicant)  
• US 6053131 A 20000425 - MUELLER LUDWIG [DE], et al  
• US 5960872 A 19991005 - HUEMER GERHART [DE], et al  
• US 2670933 A 19540302 - BAY THOMAS J

Citation (search report)  
• [X] US 5960872 A 19991005 - HUEMER GERHART [DE], et al  
• [A] US 2670933 A 19540302 - BAY THOMAS J  
• [A] US 6098576 A 20000808 - NOWAK JR THEODORE JOHN [US], et al  
• [A] US 6053131 A 20000425 - MUELLER LUDWIG [DE], et al  
• [A] TOM RYRIE ET AL: "Engine/transmission cooling system (Tom Ryrie, Hartmut van Hauten, Henri Beamer, and Henri van Helden)", RESEARCH DISCLOSURE, KENNETH MASON PUBLICATIONS, HAMPSHIRE, GB, vol. 377, no. 11, September 1995 (1995-09-01), XP007120575, ISSN: 0374-4353

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DOCDB simple family (application)  
**EP 04023692 A 20041005**; CN 200410084970 A 20041008; JP 2003348679 A 20031007; US 95369204 A 20040929